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ABSTRACT

A study was conducted at North Harris County College to determine the extent to which its Developmental Studies Program (DSP) was meeting stated goals and to assess the predictive reliability of the screening tests used to place incoming students in DSP courses. The study involved: (1) an assessment of the need for the DSP program as evidenced by the percentage of freshmen students enrolled in DSP courses from 1973-74 through 1979-80; (2) a comparison of the sex, course grades, ethnicity, high school attendance, and American College Testing (ACT) scores of developmental and non-developmental English and math students; (3) a comparison of the outcomes of developmental and non-developmental English and math courses in terms of attrition and completion rates; (4) an examination of the mainstreaming effect of the DSP as evidenced by the number of DSP students who went on to successfully complete regular freshman English and math courses; (5) a statistical correlation of grades earned by students in regular English and math courses with their scores on four screening tests (i.e., the California Achievement Tests, ACT, Scholastic Achievement Test, and Revrac tests); and (6) an assessment of the extent to which the DSP lab was used and satisfied the needs of students. The study report details the methodology and findings of each of these six components. (JP)

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EVALUATION OF THE EFFECTIVENESS OF THE DEVELOPMENTAL STUDIES PROGRAM

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EVALUATION OF THE EFFECTIVENESS

OF THE

DEVELOPMENTAL STUDIES PROGRAM

Introduction

The basic philosophy for developmental studies is consistent with the philosophy of the college which is that all individuals in a democracy should have ample opportunity to develop themselves through education to the limit of their abilities.

The primary goal of the Developmental Studies Program is to provide a realistic and viable opportunity for post-secondary education to be more accessible and meaningful for the under-prepared student. This primary goal is often described as "mainstreaming." The secondary goal of the program is to meet the personal development needs of individual students within the school at large. This secondary goal includes meeting the needs of the proficient student, as well as the under-prepared.

The Developmental Studies Program attempts to meet its goals through seven courses, three in English (ENG 130A, 130B, 131), three in Mathematics, (MATH 130A, 130B, 131), one in Human Development (HD 130), and through the Developmental Studies (D.S.) laboratory. Lab services, which include materials and tutors, are offered essentially in reading, writing, math and college study skills. Materials of interest from other disciplines are also available in the D.S. lab.

Purpose of the Study

The purpose of this study was to determine the degree of success evidenced by the Developmental Studies Program in meeting its expressed goals of mainstreaming and personal development. In addition, the tools used for screening and placement of students in D.S., ACT, SAT, Revrac, and CAT were examined for predictive effectiveness. The study was limited to the English and Mathematics areas.

Design of the Study

The study was designed according to the following outline:

A. The need for a Developmental Studies Program at NHCC.

B. The characteristics of students in developmental and non-developmental courses.

C. The success of developmental courses compared to the success of non-developmental courses.

D. The mainstreaming effect of D.S. courses as reflected in ENG 132 and MATH 132.

E. The predictive effectiveness of screening and placement tools in English and Mathematics.

F. The extent of D.S. laboratory usage and satisfaction.

A. The Need for a Developmental Studies Program - ACT scores serve as the chief criteria for advising students in D.S. courses. Students scoring below 15 on the reading sections of the ACT (English, Social Studies, and Natural Sciences) are encouraged to enroll in a D.S. English course. Students scoring below 9 on the ACT Social Studies test are encouraged to take ENG 130A before enrolling in regular college level academic courses. When it comes to advising students into Math courses, however, some inconsistencies exist among the various advising groups and the identification of which Math courses are developmental.

1. A document issued by Dr. Airola on October 12, 1978 states, "If the ACT Math score is 20 or above, the student may select his own appropriate sequence with assistance from counselors or academic advisors, If the ACT Math score is below 20, the student must see either Dr. McMillian or Mr. Tiballi, who will make a tentative placement.

2. The Developmental Studies Self-Study Report, August, 1980 (pp. 12-13) states: "For enrollment in math based upon ACT scores: 16-22 — Math 131; below 15 — Math 130A or 130B. Many students registering for math do not have ACT scores. The mathematics faculty attempt to place these students based on responses to questions (asked verbally during registration) such as: "How much mathematics have you had before this?" "How well did you do?" In some cases, the student is asked to take a short written test."

3. A document prepared by the D.S. group in Fall, 1979, The Developmental Studies Division ". . . the beacon to lead one toward self-FULFILLment" states: "Students scoring below 20 on the math section of the ACT and/or having credit for less than one year of high school algebra are encouraged to enroll in a developmental math course (MATH 130A or 130B) before taking additional math courses."

4. The Handbook of Policies and Procedures states in section 465.04b, "Students scoring below 15 on the math section of the ACT and/or having credit for less than one year of high school algebra will be encouraged to enroll in a developmental math course."

Enrollments in D.S. courses have totalled 30% of all potential freshmen English course enrollments and 74% of all potential freshmen math course enrollments since the College opened. Table 1 displays this information and further shows the relative stability of the D.S. share of freshmen English and math offerings. In the English area, 29% of D.S. enrollments fall in the lowest group of basic skill deficiencies (130A & 130B) while in the math area, 51% of D.S. enrollments are deficient at the lowest levels (130A and 130B).

TABLE I

ENROLLMENTS IN SELECTED ENGLISH COURSES

	ENG 130	ENG 130A	ENG 130B	ENG 131	All D.S. ENG.		ENG 132		D.S. ENG + ENG 132	
F73-SS$_2$74*	20			58	78	15%	448	85%	526	100%
F74-SS$_2$75	51			132	183	24%	577	76%	760	100%
F75-SS$_2$76	70			221	291	30%	671	70%	962	100%
F76-SS$_2$77	99			302	401	29%	989	71%	1,390	100%
F77-SS$_2$78	126			362	488	31%	1,108	69%	1,596	100%
F78-SS$_2$79		93	134	358	585	30%	1,350	70%	1,935	100%
F79-SS$_2$80		34	173	509	716	33%	1,422	67%	2,138	100%
TOTALS	366	127	307	1,942	2,742	30%	6,565	70%	9,307	100%
		29%		71%	100%					

NOTE: * - Includes Fall, Spring, and Summer Sessions 1 and 2.

TABLE 2

ENROLLMENT IN SELECTED MATH COURSES

	MATH 130	MATH 130A	MATH 130B	MATH 131	All D.S. MATH		MATH 132		D.S. MATH and MATH 132	
F73-SS$_2$74*	94			123	217	80%	55	20%	272	100%
F74-SS$_2$75	167			141	308	78%	88	22%	396	100%
F75-SS$_2$76	166			248	414	71%	172	29%	586	100%
F76-SS$_2$77		94	288	312	694	70%	302	30%	996	100%
F77-SS$_2$78		170	410	594	1,174	76%	378	24%	1,552	100%
F78-SS$_2$79		289	419	633	1,341	72%	517	28%	1,858	100%
F79-SS$_2$80		307	551	752	1,610	75%	525	25%	2,135	100%
TOTALS	427	860	1,668	2,803	5,758	74%	2,037	26%	7,795	100%
		51%		49%	100%					

NOTE: * - Includes Fall, Spring, and Summer Sessions 1 and 2.

B. Characteristics of Students in Developmental and Non-Developmental Courses.

1. Descriptive data were collected about students in the D.S. English courses, ENG 132, D.S. Math courses, and MATH 132. Two groups were examined:

(1) 520 students enrolled in D.S. English courses (ENG 130A, 130B, and 131), and 1,132 students enrolled in D.S. Math courses (MATH 130A, 130B, and 131) during Fall, 1978 and Spring, 1979. The 520 students represented 98% of all 532 students enrolled in D.S. English courses during that time. The 1,132 students represented 97% of all 1,163 students in D.S. Math courses during that time.

(2) 1,102 students enrolled in ENG 132, and 399 students enrolled in MATH 132 during Spring, 1979 and Fall, 1979 (some of these students had completed D.S. courses). The 1,102 students represented 98% of all 1,120 students enrolled in ENG 132 during that time. The 399 students represented 98% of all 406 students enrolled in Math at that time.

The data collected concerned sex, grades, age, ethnicity, sending high school, and ACT scores. Specific data for ENG 130A, 130B, 131, 132, MATH 130A, 130B, 131, and 132 are displayed in the Appendix. Comparisons between students in developmental and non-developmental courses are listed below:

Sex More males (62%) than females (38%) enrolled in D.S. English courses with the difference most pronounced at the lowest levels. In ENG 132, however, equal numbers of males and females were enrolled.

More males (55%) than females (45%) enrolled in D.S. Math courses. In MATH 132 the difference became even more pronounced with 59% male enrollment and only 41% female. Table 3 displays this data.

TABLE 3

ENROLLMENT BY SEX

	MALES		FEMALES		TOTAL	
D.S. ENG 130A	58	67%	29	33%	87	100%
D.S. ENG 130B	83	64%	47	36%	130	100%
D.S. ENG 131	179	59%	124	41%	303	100%
TOTAL D.S. ENG	320	62%	200	38%	520	100%
ENG 132	547	50%	555	50%	1,102	100%
D.S. MATH 130A	127	49%	134	51%	261	100%
D.S. MATH 130B	186	54%	158	46%	344	100%
D.S. MATH 131	313	59%	214	41%	527	100%
TOTAL D.S. MATH	626	55%	505	45%	1,132	100%
MATH 132	237	59%	162	41%	399	100%

Grades

Grades were relatively comparable, on the average, in both developmental and non-developmental English, except for ENG 130B. On a four-point scale (A=4, B-3, C-2, D=1), the average grade for ENG 130A was 1.7; for ENG 130B, 2.3; for ENG 131, 1.9; and ENG 132, 1.9. Attrition was highest on the lowest level, and roughly equivalent on all others, see TABLE 4.

Grades were relatively comparable, on the average, in both developmental and non-developmental Math, except for MATH 131. The average grade for MATH 130A was 1.9; for MATH 130B, 1.8; for MATH 131, 1.4; and MATH 132, 1.7. Attrition was highest on the upper levels, see TABLE 4.

TABLE 4

ATTRITION

D.S. ENG 130A	40%
D.S. ENG 130B	26%
D.S. ENG 131	30%
ENG 132	29%
D.S. MATH 130A	35%
D.S. MATH 130B	37%
D.S. MATH 131	47%
MATH 132	39%

Age Students in developmental courses were older, on the average, than students in non-developmental courses. The median age for students in ENG 130A was 21; ENG 130B, 19.6; ENG 131, 21.2, ENG 132, 18.8. The median age for students in MATH 130A was 23.6; MATH 130B, 20.8; MATH 131, 21.2; MATH 132, 19.9. Table 5 displays age data by intervals.

TABLE 5

AGE

	ALL D.S. ENG		ENG 132		ALL D.S. MATH		MATH 132	
17-19	122	*24%	615	*56%	233	21%	154	39%
20-21	189	36%	198	18%	351	31%	116	29%
22-23	44	9%	53	5%	116	10%	26	7%
24-29	76	15%	94	8%	191	17%	57	14%
30-39	64	12%	110	10%	176	15%	33	8%
40-49	18	3%	25	2%	55	5%	10	2%
50-79	7	1%	7	1%	10	1%	3	1%
TOTAL	520	100%	1,102	100%	1,132	100%	399	100%

NOTE: * - As a percentage of total enrollment.

Ethnicity

Students at NHCC are predominantly white. Table 6 displays enrollment by ethnicity.

TABLE 6

ETHNICITY

	WHITE		BLACK		SPANISH		OTHER		TOTAL	
All D.S. ENG	386	74%	40	8%	54	10%	40	8%	520	100%
ENG 132	990	90%	25	2%	59	5%	28	3%	1,102	100%
All D.S. MATH	967	85%	51	5%	76	7%	38	3%	1,132	100%
MATH 132	350	88%	4	1%	22	5%	23	6%	399	100%

Sending High Schools

The leading conduit to Developmental courses within the group examined was the G.E.D. with Aldine and MacArthur, Klein, Spring, and Humble high schools following close behind. Spring High School was the number one feeder into English 132 and Math 132, with Aldine and MacArthur, Klein, and Humble following.

ACT Scores

ACT scores by interval for each course are shown in the Appendix. A comparison of scores is shown in TABLE 7.

TABLE 7

ACT SCORES

	RANGE OF ACT SCORES	STANDARD DEVIATION	$\bar{M}$	70% of SCORES*
ENG 130A	3-17	2.33	8.83	6.50-11.16
ENG 130B	2-26	4.00	10.19	6.19-14.19
ENG 131	4-23	3.17	11.48	8.31-14.65
ENG 132	0-28	4.67	16.42	11.75-21.09
MATH 130A	2-21	3.17	10.57	7.70-14.04
MATH 130B	0-26	4.33	12.94	8.64-17.27
MATH 131	0-27	4.50	15.15	10.65-19.65
MATH 132	0-28	4.67	17.43	12.76-22.10

NOTE: * - 70% of scores cluster around the mean. The method used here is a short-cut statistical technique (range divided by 6 = S.D.)

2. One other specialized group was also studied, a group of students who had not taken any D.S. courses in English. A group of 299 students among those enrolled during 1979-80 and prior semesters was compiled and processed through the ACT basic research service. These students had completed a minimum of 9 credit hours (with grades A-D), completed ENG 132, and had not completed any D.S. English course. An assumption was made that this group approximated, as nearly as possible at NHCC, the "traditional type of college freshmen" who did not require intervention or remedial courses. Mean ACT scores for this group of 117 males and 182 females were as follows:

English	18.13	S.D. 5.15
Math	18.04	S.D. 7.54
Social Science	17.81	S.D. 7.16
Natural Science	21.36	S.D. 6.40
Composite	18.96	S.D. 5.68

C. Success of Developmental Courses Compared to the Success of Non-Developmental Courses.

Success was measured by course outcomes, completion (A-D), and attrition (W+NC). Table 8 shows that course outcomes for D.S. English courses are comparable to outcomes for ENG 132. Table 9 shows that course outcomes for D.S. math courses are comparable to MATH 132. The conclusion might be drawn that equivalent academic standards are maintained on both levels.

TABLE 8

COURSE OUTCOMES IN SELECTED ENGLISH COURSES

	D.S. ENG (130A,B,131)				ENG 132			
	Total Enr.	(A-D) Comp.	(W/NC) Attrition	I & Ps	Total Enr.	(A-D) Comp.	(W/NC) Attrition	I & Ps
Fall, 1977	294	210	73	11	657	495	156	6
Spring, 1978	174	124	49	1	307	196	106	5
Fall, 1978	313	210	94	9	802	575	206	21
Spring, 1979	219	147	71	1	346	228	106	12
Fall, 1979	404	270	128	6	774	537	225	12
Spring, 1980	251	174	71	6	388	247	133	8
Total Enrolled	1,655	1,135	486	34	3,274	2,278	932	64
	100%	68.6%	29.4%	2%	100%	69.6%	28.5%	1.9%

TABLE 9

COURSE OUTCOMES IN SELECTED MATH COURSES

	D.S.MATH (130A, B, 131)				MATH 132			
	Total Enr.	(A-D) Comp.	(W/NC) Attrition	I & Ps	Total Enr.	(A-D) Comp.	(W/NC) Attrition	I & Ps
Fall, 1977	543	327	216	0	162	82	80	0
Spring, 1978	448	244	202	2	177	97	80	0
Fall, 1978	650	389	259	2	241	129	111	1
Spring, 1979	513	269	241	3	206	132	74	0
Fall, 1979	771	457	306	8	200	113	87	0
Spring, 1980	604	335	268	1	227	126	100	1
Total Enrolled	3,529	2,021	1,492	16	1,213	679	532	2
	100%	57.3%	42.3%	.4%	100%	56.0%	43.9%	.1%

D. The Mainstreaming Effect of D.S. Courses as Reflected in ENG 132 and MATH 132.

The mainstreaming effect of D.S. courses was most pronounced in the Math area (where 74% of all potential freshmen Math enrollment are developmental), but still considerable in the ENG area.

Of the 1,120 students enrolled in ENG 132 during Spring, 1979 and Fall, 1979, 765 completed successfully (A-D). Of these, 765 successful completions, 122 students had successfully completed D.S. English courses prior to enrollment in ENG 132. Based on this data, the statement that approximately 16% of those students in the regular college freshman English course had mainstreamed is defensible. Table 10 shows the courses completed successfully (A-D) before mainstreaming.

TABLE 10

ENG 132 PLUS

ENG 130	6	
ENG 130A	2	
ENG 130B	12	
ENG 131	102	122
ENG 130 + 131	6	
ENG 130A + 130B	0	
ENG 130A + 130B + 131	0	
ENG 130A + 131	0	
ENG 130B + 131	6	

Of the 406 students enrolled in MATH 132 during Spring, 1979 and Fall, 1979, 245 completed successfully (A-D). Of these 245 successful completions, 131 had successfully completed D.S. Math courses prior to enrollment in MATH 132. Based on this data, the statement that approximately 53% of those students had mainstreamed is defensible. Table 11 shows the courses completed successfully (A-D) before mainstreaming.

TABLE 11

MATH 132 PLUS

MATH 130	0
MATH 130A	0
MATH 130B	4
MATH 131	90
MATH 130 + 131	0
MATH 130A + 130B	0
MATH 130A + 130B + 131	6
MATH 130B + 131	31
MATH 130A + 131	0
	131
MATH 132 and no D.S.	114

b. The Predictive Effectiveness of Screening and Placement Tools in English and Mathematics.

Several tools are used to place students in English and Math courses.

In English, ACT (or SAT equivalents) are used as a gross screener for identifying students needing developmental work. The Revrac test is used as a quick test during registration if placement is in doubt at the 130A or 130B level, or if ACT scores are unavailable. The California Achievement Test (CAT) is a lengthy diagnostic test given in the first week of class. If diagnosis reveals erroneous placement, students are shifted to the appropriate level.

In Math, the only formal tool used for placement is the ACT (or SAT equivalents). Students can also be shifted to a more appropriate level after classes start.

The predictive effectiveness of the formal placement tools was examined by correlating the scores obtained on the tools with grades of students enrolled in ENG 132 and MATH 132. The test scores and grades of students successfully completing ENG 132 and MATH 132 in Spring, 1979 and Fall, 1979 were correlated. Correlations should be .45 or more to be useful for counseling and placement purposes.(1) No correlations high enough to be significant for counseling and placement were obtained in either English or Math. Table 12 displays the correlations obtained.

(1) Letter received June 15, 1980 from James Maxey, Assistant Vice-President, ACT.

TABLE 12

CORRELATIONS OF SELECTED TESTS WITH GRADES A-D[1]

N	COURSE	TEST	RPB
448	ENG 132	ACT[2]	.2959
143	ENG 132	SAT[3]	.41094
61	ENG 132	CAT[4]	.33919
46	ENG 132	ACT[2] and CAT[4]	.3903
117	MATH 132	ACT[5]	.06972
28	MATH 132	SAT[6]	.02623

[1]Numbers of matched sets to compare Revrac and ENG 132; CAT, Revrac and ENG 132; ACT, Revrac and 132 were too small to be meaningful.

[2]Composite of ACT English, Natural Science, and Social Science.

[3]SAT verbal

[4]CAT tests 1, 2, 4, 5

[5]ACT Math only

[6]SAT Quantitative only.

The lack of predictive effectiveness was verified in two additional ways. (1) A study prepared by this office June 2, 1978 based on four small studies done in-house had also shown no predictive effectiveness. (2) The research services provided by ACT have shown very little predictive power.

ACT prepared correlations of ACT test scores and college GPA have ranged from .36 to .455 in research done from 1974-1980. In the year 1976 when the peak of .455 was reached, the standard error of the estimate was .858, past the limit of the acceptable level of .7. When high school averages (which are not required at NHCC) were added to ACT scores, correlations ranged from .41 to .51 in research done from 1974-1980. In the year 1977 when .513 was reached, the standard error of the estimate was .823 and in 1977 when .461 was the rpb, error was .741.

The group prepared for the ACT basic research service in 1979-1980 was carefully selected to see if ACT could predict for those students who did not need intervention. A group of 299 students with the following characteristics were selected for study:

a. Only students who had completed nine or more credit hours.
b. Completion meant A-D.
c. College GPA was on a four-point scale, A=4, B=3, C-2, D=1.
d. All students had completed ENG 132 without taking prior D.S. English courses.

Even in this select group, predictive power was not achieved. The multiple correlation of all four ACT tests with GPA was .34, if high school averages were added correlating rose to .43. Individual correlations were .25 for the ACT English test and college GPA, and only .03 for the ACT Math test and college GPA.

F. The Extent of S.S. Laboratory Usage and Student Satisfaction

Records of D.S. lab attendance have been kept since Fall, 1978 and indicate that lab use is growing rapidly. Table 13 reflects lab usage by walk-in or referred students and does not take into account classes that meet in the lab regularly. Visits for September, 1980 are currently averaging 81 per day.

TABLE 13

LAB ATTENDANCE RECORD

SEMESTER	ATTENDANCE
Fall, 1978	1,784
Spring, 1979	2,036
Summer, 1979	631
Fall, 1979	3,846
Spring, 1980	3,063
Summer, 1980	1,380

A survey of 157 D.S. students was reported in the Developmental Studies Self-Study Report, 1980. Of those that had used the lab, 75.4% indicated that lab activities were worthwhile. Students went to the lab to study, for clarification, to prepare for class, to go over problems not understood, to get help for homework, and to better understand their courses.

SUMMARY

The two major objectives of the Developmental Studies Program are mainstreaming and personal development of individual students. The findings of this study indicated that both objectives are being met. Students identified as needing remediation have exhibited improvement and achievement, and a substantial percentage have mainstreamed into college level work.

That an audience exists for the D.S. Program is clear, the D.S. share of freshmen English and Math courses has been relatively stable and grown proportionately with the regular programs. An original concern, verbalized when the program was developed, that we might eventually run out of students needing remediation, has not materialized nor has the concern that an extended D.S. Program might reduce the academic standards of the college level programs been actualized. Indeed, as the study indicated, the number of students needing

remediation to be successful in college level work is so large a part of the NHCC population, that a successful remedial program may be the best insurance possible for the maintenance of high academic standards.

Differences between developmental and non-developmental students are not sharply pronounced when viewed in total. Participation rates by sex were relatively stable in Developmental Studies and non-Developmental Studies courses, except at the lowest levels of English where rates of male enrollment were higher. Achievement in Developmental Studies and non-Developmental Studies courses was at a comparable level when grades, completion, and attrition were examined. Students in Developmental Studies were slightly older and come from a slightly higher proportion of black and Spanish backgrounds. The biggest difference between Developmental Studies and non-Developmental Studies students was shown in performance on the ACT tests, which measure academic achievements, as might be expected.

The problem area in Developmental Studies concerns counseling and placement. Counseling of students takes place on many levels, by individual teachers, divisions, the Developmental Studies team, and the Counseling group. A need for coordination and consistency was indicated in the study.

No predictive effectiveness for the tools used for placement (ACT, SAT, CAT, and Revrac) was identified in this study. Prediction was particularly low in the MATH area. Some potential was indicated for use of the CAT, as combined with ACT, an increase in prediction was shown, but, still not to a useful level. The predictiveness of Revrac could not be ascertained due to a lack of matched sets, While prediction was not ascertained by the ACT tests, there is some evidence that ACT is sorting Developmental Studies students from non-Developmental Studies students. Students who were clearly non-Developmental Studies students had higher ACT scores on the average than did Developmental Studies students.

APPENDIX

A-1	English 130A
A-2	English 130B
A-3	English 131
A-4	English 132
A-5	Math 130A
A-6	Math 130B
A-7	Math 131
A-8	Math 132

ENGLISH 130A

Total Students 87 Males 58, Females 29

Average Grade 1.7 (A = 4, B = 3, C = 2, D = 1)

Standard Deviation 1.5

Course Completion 52 (60%)

Attrition 35 (40%)

Ages Median Age 21

18-19	18
20-21	32
22-23	9
24-29	14
30-39	10
40-49	3
50-79	1

Ethnicity

White 55, Black 10, Spanish 9, Other 13

High Schools

Klein	7
G.E.D.	6

ACT Scores Mode 8, 9, 10 Mean 8.83

(0-4)	6
(5-8)	18
(9-12)	24
(13-16)	4
(17-20)	1
(21-24)	0
(25-28)	0

Total Scores 53

ENGLISH 130B

Total Students 130 Males 83 Females 47

Average Grade 2.3 (A = 4, B = 3, C = 2, D = 1)

Standard Deviation 1.6

Course Completion 96 (74%)

Attrition 34 (26%)

Ages Median Age 19.6

18-19	35
20-21	48
22-23	12
24-29	17
30-39	12
40-49	4
50-79	2

Ethnicity

White 95 Black 10 Spanish 20 Other 5

High Schools

G.E.D.	16
MacArthur	11
Klein	10
Spring	10
Humble	7
Aldine	5

ACT Scores Mode 12 Mean 10.19

(0-4)	5
(5-8)	29
(9-12)	38
(13-16)	19
(17-20)	3
(21-24)	0
(25-28)	1
Total Scores	95

ENGLISH 131

Total Students 303 Males 179 Females 124

Average Grade 1.9 (A = 4, B = 3, C = 2, D = 1)

Standard Deviation 1.5

Course Completion 212 (70%)

Attrition 91 (30%)

Ages Median Age 21.2

18-19	69
20-21	109
22-23	23
24-29	45
30-39	42
40-49	11
50-79	4

Ethnicity

White 236 Black 20 Spanish 25 Other 22

High Schools

G.E.D.	36	Spring	6
MacArthur	20	Eisenhower	11
Aldine	18	Conroe	9
Humble	16	Sam Houston	8
Klein	15	Cypress Fairbanks	6
Spring	13	Reagon	5

ACT Scores Mode 10 Mean 11.48

(0-4)	1
(5-8)	39
(9-12)	101
(13-16)	54
(17-20)	17
(21-24)	2
(25-28)	0
Total Scores	214

ENGLISH 132

Total Students 1,102 Males 547 Females 555

Average Grade 1.9 (A = 4, B = 3, C = 2, D = 1)

Standard Deviation 1.4

Course Completion 772 (70%) Incomplete 12

Attrition 318 (29%)

Ages Median Age 18.8

17	67
18-19	548
20-21	198
22-23	53
24-29	94
30-39	110
40-49	25
50-79	7

Ethnicity

White 990 Black 25 Spanish 59 Other 28

High School

Spring	140	Conroe	31	Splendora	7
Klein	97	Eisenhower	29	Northbrook	7
G.E.D.	81	San Houston	25	Smiley	6
Humble	68	McCullough	21	Reagan	6
Aldine	52	Nimitz	12	Jersey Village	5
Cypress Fairbanks	49	Waltrip	11	Spring Woods	5
MacArthur	47	New Caney	11	Elmore	5
Tomball	39	Carrierdale	11		

ACT Scores Mode 18 Mean 16.42

(0-4)	5	(17-20)	191
(5-8)	15	(21-24)	81
(9-12)	110	(25-28)	34
(13-16)	191	Total Scores	627

MATH 130A

Total Students 261 Males 127 Females 134

Average Grade 1.9 (A = 4, B = 3, C = 2, D = 1)

Standard Deviation 1.6

Course Completion 170 (65%)

Attrition 91 (35%)

Ages Median Age 23.6

18-19	32
20-21	69
22-23	25
24-29	45
30-39	60
40-49	25
50-79	5

Ethnicity

White 205 Black 26 Spanish 23 Other 7

High School

G.E.D.	49
MacArthur	12
Aldine	12
Spring	11
Conroe	10
Sam Houston	7
Klein	5

ACT Scores Mode 10 Mean 10.87

(0-4)	7
(5-8)	39
(9-12)	74
(13-16)	43
(17-20)	10
(21-24)	1
(25-28)	0
Total Scores	174

MATH 130B

Total Students 344 Males 186 Females 157

Average Grade 1.8 (A = 4, B = 3, C = 2, D = 1)

Standard Deviation 1.6

Course Completion 218 (63%)

Attrition 126 (37%)

Ages Median Age 20.8

18-19	67
20-21	114
22-23	33
24-29	49
30-39	61
40-49	17
50-79	3

Ethnicity

White 297 Black 15 Spanish 21 Other 11

High Schools

G.E.D.	34
Spring	25
Humble	17
Aldine	14
MacArthur	13
Klein	11
Eisenhower	9
Conroe	7
Spring Branch	5

ACT Scores Mode 12 Mean 12.94

(0-4)	5
(5-8)	25
(9-12)	71
(13-16)	56
(17-20)	34
(21-24)	5
(25-28)	3

Total Scores 199

MATH 131

Total Students 527 Males 313 Females 214

Average Grade 1.4 (A = 4, B = 3, C = 2, D = 1)

Standard Deviation 1.6

Course Completion 281 (53%)

Attrition 245 (47%)

Ages Median Age 21.2

18-19	134
20-21	168
22-23	58
24-29	97
30-39	55
40-49	13
50-79	2

Ethnicity

White	465	Black	10	Spanish	32	Other	20

High School

Klein	32	Conroe	18
Aldine	30	Cypress Fairbanks	15
Spring	30	Eisenhower	10
G.E.D.	29	Carverdale	8
Humble	28	New Caney	6
MacArthur	19		

ACT Scores Mode 14 Mean 15.15

(0-4)	2
(5-8)	12
(9-12)	57
(13-16)	70
(17 20)	52
(21-24)	25
(25-28)	8
Total Scores	226

MATH 132

Total Students 399 Males 237 Females 162

Average Grade 1.7 (A = 4, B = 3, C = 2, D = 1)

Standard Deviation 1.5

Course Completion 245 (61%)

Attrition 154 (39%)

Ages Median Age 19.9

17	2
18-19	152
20-21	116
22-23	26
24-29	57
30-39	33
40-49	10
50-79	3

Ethnicity

White	350	Black	4	Spanish	22	Other	23

High School

Spring	37	Conroe	10
Klein	31	MacArthur	9
Humble	24	Eisenhower	8
G.E.D.	22	Sam Houston	8
Aldine	22	Nimitz	6
Cypress Fairbanks	21		

ACT Scores Mode 20 Mean 17.43

(0-4)	2
(5-8)	3
(9-12)	27
(13-16)	46
(17-20)	52
(21-24)	30
(25-28)	15
Total Scores	175

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